Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) An *in vitro* method for screening agents inducing islet cell neogenesis or duct-to-islet cell transdifferentiation, which comprises the steps of:

a) expanding *in vitro* a dedifferentiated population of duct epithelial cells with at least bipotentiality; ~~cells of a duct-like structure obtained by inducing cystic formation in cells in or associated with post-natal islet of Langerhans;~~

b) treating said expanded dedifferentiated population of duct epithelial cells ~~cells of said duct-like structure~~ with an agent being screened; and

c) determining ~~potency~~ effectiveness of said agent of inducing ~~islet cell~~ differentiation of said population of dedifferentiated duct-~~like structure~~ epithelial cells ~~in becoming~~ to insulin-producing islet cells by determining a parameter indicative of insulin production.

2. (currently amended) The method of claim 1, wherein step a) and step b) are concurrently effected using a solid matrix, basal feeding medium and appropriate growth factors to permit the development, maintenance and expansion of a dedifferentiated ~~cell~~ population of duct epithelial cells with at least bipotentiality.

3. (original) The method of claim 2, wherein said solid matrix is 3-D collagen type-1 gel matrix, said basal liquid medium is DMEM/F12 medium supplemented with EGF and cholera toxin.

4. (original) The method of claim 1, wherein said cells are human cells.

5. (withdrawn) A kit for carrying out the method of claim 1, which comprises:

a) a solid matrix for 3-D culture of cells;

b) a culture medium supplemented.

6. (withdrawn) The kit of claim 8, wherein sais solid matrix is 3-D collagen type-1 gel matrix and said medium is DMEM/F12 medium supplemented with EGF and cholera toxin.

7. (withdrawn) The kit of claim 8, which further comprises insulin-producing islet cells in a suitable culture medium, wherein said islet cells are characterized.

8. (withdrawn) An islet cell culture, which comprises insulin-producing islet cells in a suitable culture medium, wherein said islet cells are characterized.

9. (withdrawn) The islet cell culture of claim 8, wherein said characterization is genetic, immunologic or genomic.

10. (withdrawn) The islet cell culture of claim 9, wherein said characterization is effected using a DNA microarray analysis.

11. (withdrawn) An *in vitro* method for evaluating biological effects of agents on islet cells, which comprises the steps of:

a) treating the islet cell culture of any on of claims 8 to 10 with an agent being evaluated for a time sufficient for a biological effect to be occurring; and

b) determining biological effects of said agent on islet cells by monitoring changes in insulin production compared to a standard curve obtained with a control islet cell culture.

12. (withdrawn) The method of claim 11, wherein said agent is selected from the group consisting of immunosuppressive agents, growth factors and anti-apoptotic agents.

13. (new) The method of claim 1, which further comprises a step i) prior to step a):

i) dedifferentiating a population of isolated post-natal pancreatic islet cells to produce a dedifferentiated population of duct epithelial cells.

14. (new) The method of claim 13, wherein said population of isolated post-natal pancreatic islet cells is 95% pure.

15. (new) The method of claim 13, wherein said population of isolated post-natal pancreatic islet cells is 100% transformed into a dedifferentiated population of duct epithelial cells.

16. (new) The method of claim 1, wherein said expanded dedifferentiated population of duct epithelial cells is positive for a CK-19 duct epithelial cell marker and is insulin-free.

17. (new) The method of claim 1, wherein said parameter is an appearance of solid spherical structures.

18. (new) The method of claim 1, wherein said parameter is an appearance of endosecretory granules.

19. (new) The method of claim 1, wherein said parameter is an increase in expression of the pro-insulin mRNA.

20. (new) The method of claim 1, wherein said parameter is an increase in the expression of PDX-1.

21. (new) The method of claim 1, wherein said parameter is an increase in the percentage of differentiated insulin-producing islet cells.

22. (new) The method of claim 1, wherein said parameter is an increase in expression of an islet cell hormone.

23. (new) The method of claim 1, wherein said parameter is an increase in insulin secretion.

24. (new) The method of claim 1, wherein said parameter is an increase in insulin-producing islet cell survival.

25. (new) The method of claim 1, wherein said parameter is at least two parameters chosen from an appearance of solid spherical structures, an appearance of endosecretory granules, an increase in expression of the pro-insulin mRNA, an increase in the expression of PDX-1, an increase in the percentage of differentiated islet cells, an increase in expression of a islet cell hormone, an increase in insulin secretion, and/or an increase in cell survival.

26. (new) The method of claim 22, wherein said islet cell hormone is insulin.

27. (new) The method of claim 22, wherein said islet cell hormone is glucagon.

28. (new) The method of claim 22, wherein said islet cell hormone is somatostatin.

29. (new) The method of claim 22, wherein said islet cell hormone is a combination of at least two hormones chosen from insulin, glucagon, and/or somatostatin.